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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,508	10/23/2001	Ramakrishna Kakarala	10010025-1	3254
7590	12/06/2004		EXAMINER	CHEN, WENPENG
			ART UNIT	PAPER NUMBER
			2624-	
DATE MAILED: 12/06/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/001,508	KAKARALA ET AL.
	Examiner Wenpeng Chen	Art Unit 2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-30 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 23 October 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/23/01</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: ____. |

Examiner's Comments

1. Claims 17 and 18 are missing in the record of USPTO. Therefore, the present Office Action is prepared based on the record of the present application pending at USPTO as of 12/2/2004.

2. To speed up the prosecution process, Examiner Chen called Mr. Steve R. Greenfield on 12/1/2004 and received a copy of Claims 17 and 18, as shown below.

17. The system of claim 15 wherein a Huffman-code table comprising a plurality of codes associated with the plurality of matrices is included in a header of the image file.

18. An article of manufacture for JPEG-image-compression adaptive quantization, the article of manufacture comprising:

at least one computer-readable medium; and

processor instructions contained on the at least one computer-readable medium, the processor instructions configured to be readable from the at least one computer-readable medium by at least one processor to thereby cause the at least one processor to operate to:

associate each of a plurality of quantization matrices to a corresponding end-of-block code of a plurality of end-of-block codes;

quantize a discrete cosine transform of each of a plurality of data blocks of an image file using at least two of the plurality of quantization matrices; and

include in the image file, for at least one data block of the plurality of data blocks, the end-of-block code corresponding to the quantization matrix used to quantize the discrete cosine transform of the at least one data block of the plurality of data blocks.

Examiner Chen will also provide his opinion also regard to Claims 17, 18, and dependent claims of Claim 18, so Applicants can respond in communication subsequent to the present Office Action.

Specification

3. The disclosure is provisionally objected to because of the following informalities.

-- Shall the symbol "(0, -1)" in line 9, page 16 be changed to "(0, 1)"?

4. The attempt to incorporate subject matter into this application by reference to Pennebaker et al. reference in page 18 is improper because it is not a non-patent reference.

Claim Objections

5. Claims 17-22 are provisionally objected to because of the following reasons.

-- Claims 17-18 are objected because they are missing in the official record.

-- Because Claim 18 is missing in the official record, Claims 19-22 do not have proper dependence.

The objection can be overcome by including the above Claims 17-18 in the next amendment.

6. Claims 1-6 and 18-20 are objected to because of the following informalities.

-- The phrase "the end-of block" in line 10, Claim 1 shall be changed to "the end-of-block".

-- The phrase "the end-of block" in line 14, Claim 18 shall be changed to "the end-of-block".

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 11-13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 11-13 claim JPEG image files that are mere data per se.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 1-6, 11-16, and 23-30 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "the end-of block code corresponding to the quantization matrix used to quantize *the discrete cosine transformed digitized image file* of the at

least one data block", does not reasonably provide enablement for "the end-of block code corresponding to the quantization matrix used to quantize the discrete cosine transform of the at least one data block". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to implement the invention commensurate in scope with these claims.

Discrete cosine transform is a process not data, and therefore cannot be quantized as recited in Claims 1, 5, 6, 11-13, 14, 23, and 27.

11. Claims 17-18 as shown above and Claims 19-22 are provisionally rejected under 35 U.S.C. 112, first paragraph, because of the same reason set forth above with regard to the limitation "quantize the discrete cosine transform".

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 7-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for the following reasons.

There are insufficient antecedent bases for the following limitations.

-- Claim 7 recites the limitation "the identification" in line 10.

Claim interpretation

14. For further examining the pending claims with regard to the prior art, the Examiner made the following interpretations.

-- Change "to quantize the discrete cosine transform" in all claims "to quantize *the discrete cosine transformed digitized image data*".

Allowable Subject Matter

15. Claims 7-10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowance. The prior art fails to teach the system of Claim 7 which specifically comprises the following feature in combination with other recited limitations:

-- wherein the quantizer generates an identification including, in the discrete-cosine-transformed image data, an end-of-block code associated with the matrix used to quantize the discrete-cosine-transformed data block.

16. *Examiner's Comments about Potential Allowable Subject Matter:*

The interpreted Claims 1-6 and 14-30 are not rejectable over the prior art.

The following is a statement of reasons for this conclusion. The prior art fails to teach the methods of the interpreted Claims 1 and 27, the systems of the interpreted Claim 14, the article of the interpreted Claim 18, and the decoder of the interpreted Claim 23 which

specifically comprise the following feature (or its equivalence) in combination with other recited limitations:

-- in the image file, for at least one data block of the plurality of data blocks, the end-of-block code corresponding to the quantization matrix used to quantize the discrete cosine transformed image data of the at least one data block of the plurality of data blocks.

17. The prior art made of record in form PTO-892 are the most relevant references. Some of them teach the feature of coding and transmitting ID of Q table used for quantization. None teaches the feature of "end-of-block code corresponding to the quantization matrix used to quantize the discrete cosine transformed image data" recited in the claims, namely none teaches using a single code for a block to signal both end of a block and the used Q table.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wengpeng Chen whose telephone number is 703 306-2796. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on 703 308-7452. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications. TC 2600's customer service number is 703-306-0377.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Wenpeng Chen
Primary Examiner
Art Unit 2624

December 3, 2004

